Developing a Successful Incentive Program from the International Perspective

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SEAD | Super-efficient Equipment and Appliance Deployment

CLEAN ENERGY MINISTERIAL

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The Super-efficient Equipment & Appliance Deployment Initiative

Governments working together to save energy

Australia | Brazil | Canada | Chile | European Commission | Germany | India | Indonesia

Japan | Korea | Mexico | Russia | South Africa | Sweden | United Arab Emirates | United Kingdom | United States

- *China is an observer to the SEAD Initiative*

Accelerating pace of market transformation to more energy efficient products through technical analysis and assistance, sharing of information and best practice, and joint activities

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Accelerating the Transition to Clean Energy Technologies

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SEAD Initiative

Collaborator

4E Efficient Electrical End-Use Equipment International Energy Agency

Technical Analysis

Berkeley Lab

Operating Agent

clasp

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SEAD accelerates the pace of market transformation for energy efficient products

Awards — Showcase leadership in energy efficiency

Incentives — Increase demand for efficient products

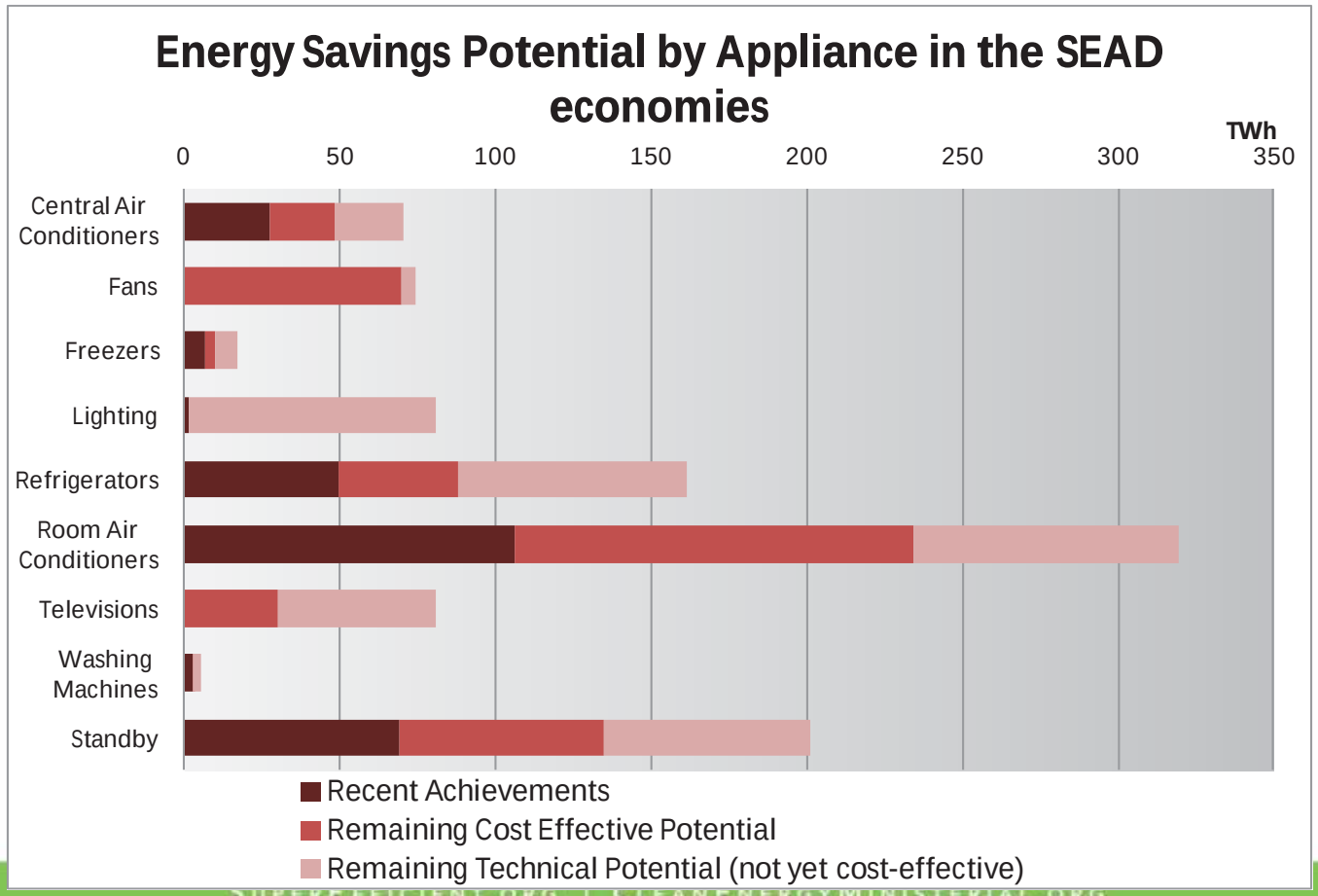
Procurement — Lead by example, with tools & best practice

Standards & Labels — Ensure energy efficiency performance

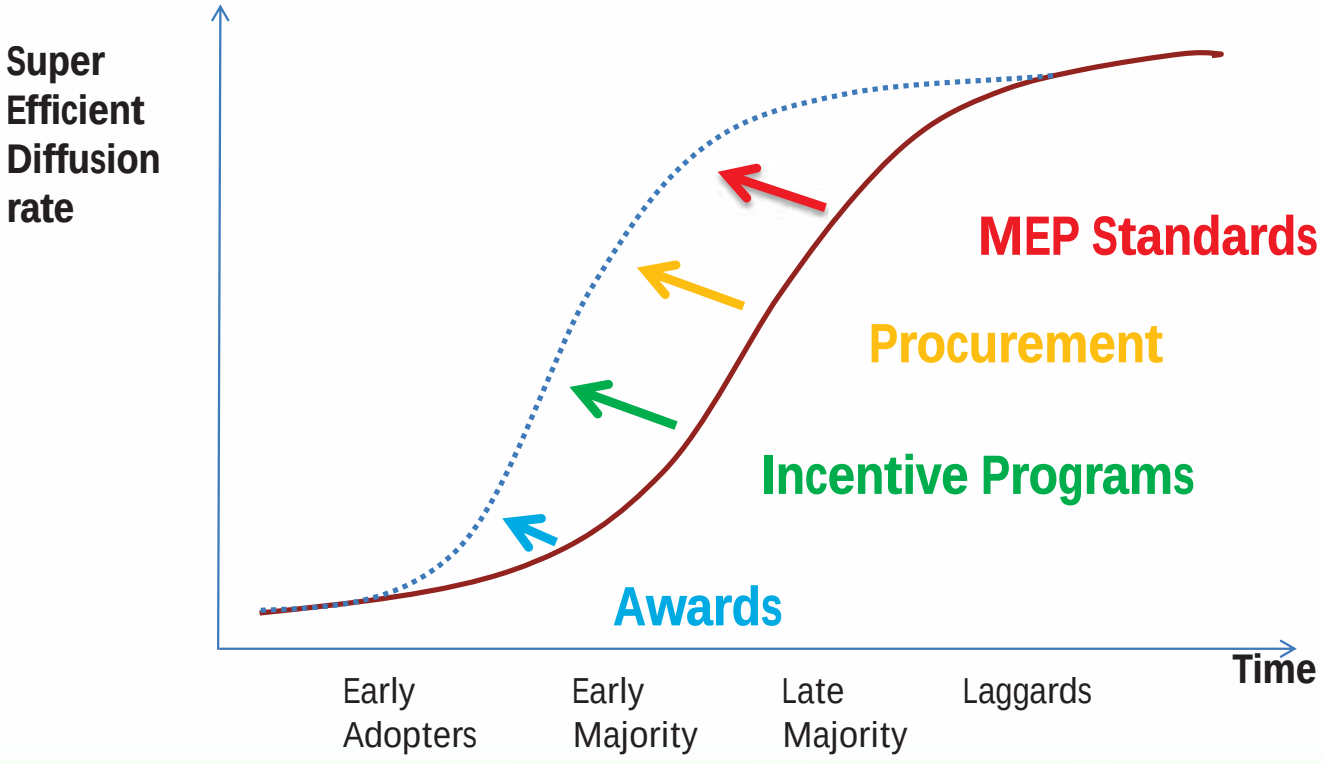
Technical Analysis — Provide foundation for policy success

Technical Assistance — Support Implementation

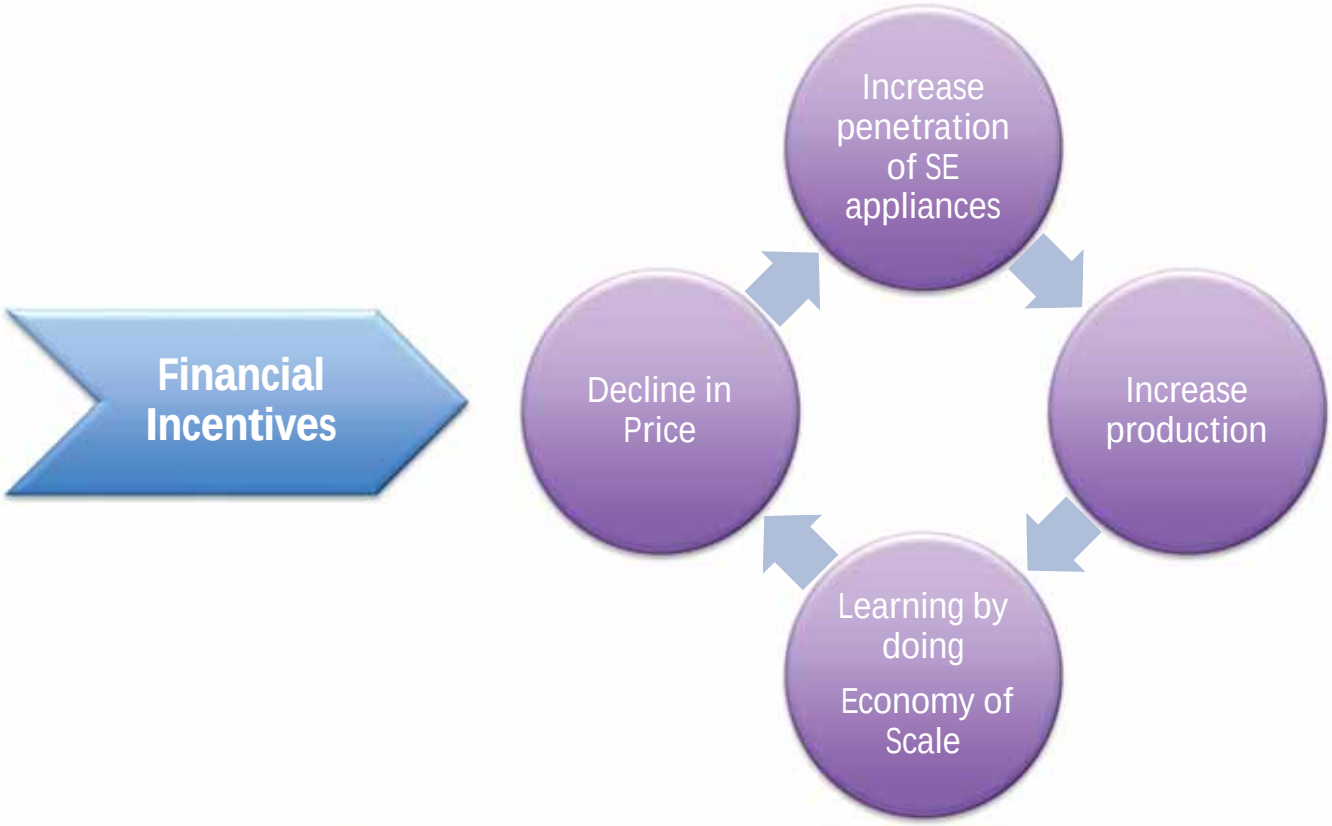
What technical analysis tells us...



Accelerating Super-Efficient (SE) rate of diffusion



Cycle of Super-efficient Deployment



What Constitutes a Successful Energy Efficiency Program?

- ✓ Clear performance goals
- ✓ A good understanding of the market barriers
- ✓ Sufficient administrative capacity
- ✓ A cost effective program
- ✓ Clarity with respect to how performance will be measured

12 Key Priority Decision Points

Policy Framework

- Set goals
- Define institution roles
- Establish funding source
- Build analytical foundation

Implementation Mechanism

- Select target appliance(s)
- Define technical specification
- Select recipient
- Define form of incentive
- Select incentive disbursement

Supporting Elements

- Define EM&V
- Plan marketing and awareness campaigns
- Launch a pilot program

Each step requires detailed consideration…

Start by setting your goals

Define goals

- Energy savings (MWh, MW)
- Reduced GHG emissions (CO_2, CFC, HCFC)
- Market transformation (% ownership, sales)
- Achieving a higher standard (A,B,C level)
- Economic stimulus ($ spent, job created)
- Foster local manufacturing industry (VA, job)
- Increase access to energy services (% of increase service, etc.)

Considerations:

– Establish one or two overarching goals
– Measureable objectives help you track progress and results
– The remaining goal aspirations become co-benefits

Institutional roles have to be defined

- Broad range of actors whose roles need defining by government
- Specific roles to define: administering, implementing, funding, monitoring and evaluating.

Considerations for selecting who should administrate programs:

- **Authority**: Confer sufficient authority to implement EE programs
- **Co-ordination**: Create effective partnerships within and across levels of government
- **Capacity**: ensure enough administrative capacity is allocated
- **Stakeholders**: Engage stakeholders early to ensure their buy-in

Define the source of funding

Unlike regulations, the implementation of incentive program requires a fund to directly incentivize actors

Possible Sources

- Government general fund
  (China, US)
- Utility funds/ratepayer funds
  (Ex: US, Brazil)
- Multilateral institutions
  (Ex: India, Mexico)

Consideration

- Divert subsidies on electricity tariff to fund EE
- Sustainability: a reliable and continuous source of funding is often found as a critical factor of success of programs results

Select target appliances based on strong technical analysis

Prioritization of targeted appliances should be based on programme goals, savings potential, cost analysis, market barriers and the available budget.

Additional Considerations

- Equity of program distribution
  - Some appliances can be considered as luxury goods
  - Income class appliance penetration
  - Localization (urban/rural) appliance penetration
- Carry out consultations on analytical studies

Define the intervention point

- Identify the actors in the supply chain that face significant market barriers
- Design incentive to address or help remove these barriers

Manufacturers
Upstream Programs

Barriers Addressed:
-Small or non-existent production of highly efficient equipment
-Uncompetitive price

Main Advantages:
-Small number of actors
-Multiplier effect on retail price

Distributors & Retailers
Midstream Programs

Barriers Addressed:
-Lack of available products in stocks
-Lack of marketing outreach

Main Advantages:
-Leverages marketing capabilities
-Meets customers at point of decision

Consumers
Downstream Programs

Barriers Addressed:
-Affordability
-Lack of information

Main Advantages:
-Positive spillover effect
-Allows incentive to be directed to specific groups e.g., the low income

Define the type of incentive

- Given other characteristics of the program, which of the following program designs is appropriate:
  - Replacement of units
  - Rebates
  - Free distribution of units
  - Eco points
- Fiscal advantages
  - Income tax credit
  - Sale tax reduction

Programme	What is it?	Advantage
FISCAL	Income tax credits or tax deductions - reduces expense of purchasing energy efficiency systems	Easy implementation
CASH REBATES	Price reduction to consumers to purchase new energy efficient appliances	Spillover effects to other customers
BULK PURCHASE	Subsidies for manufacturers or retailers to bring down wholesale price of energy efficient appliances	Leverage investment, limit admin costs, increase product availability at point of retail
REPLACEMENT	Replacing inefficient residential appliances before end of their useful lives with significantly more efficient ones	Low-income households, recycle materials; comply with Montreal Protocol to remove CFCs
ECO POINTS	Awards system offering consumers carbon points, redeemable for discounts in price or cash, for high-efficiency electronic and electrical appliance purchases	Promoting low-carbon lifestyles by raising consumer responsibility and awareness

Define the energy specifications

What energy consumption conditions are required to get the incentive?

Consideration:

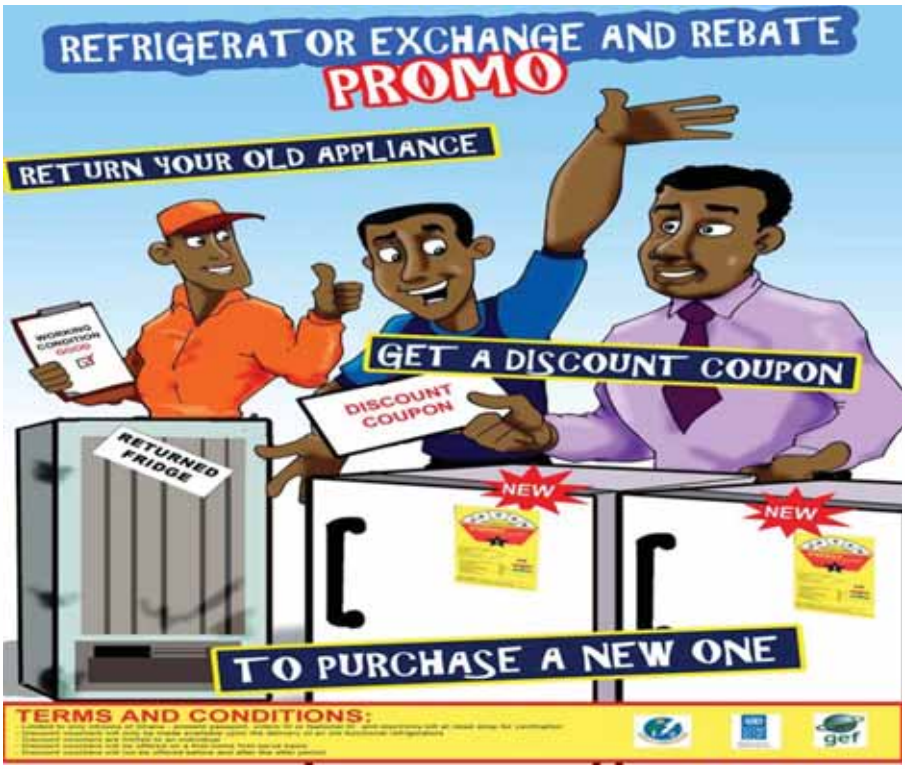
- Optimize between the cost and savings opportunities
- Market Availability
- Technology neutrality
- Test facility capacity for specification above top labeled category
- Should any additional requirements be incentivized - HCFC, safety, quality, public acceptance

Develop and carry out EM&V processes

- **Measurement**
  - Defining a baseline
  - Devising a methodology for comparison
- **Verification**
  - Establish a verification process (proof of sale or purchase)
- **Evaluation**
  - Methodology to use (free ridership, rebound and leakage)
  - Outside/internal evaluation

EM&V requires funding too!

Market and promote the programme



Downstream programmes require marketing and awareness campaigns to increase uptake of the incentive

Some key considerations...

- Manufacturers should be involved in programme design – particularly for upstream programmes
- Incentives are not a permanent instrument - should be phased out uptake of efficient products increases and costs decrease over time
- Consider impact of market transformation:
  - Only most efficient products should be financially incentivised
  - Incentives not effective if product has +30% market saturation
- EM&V essential to measure success and to inform next steps
- Look to other countries for best practice and lessons learned...

International Collaboration!!

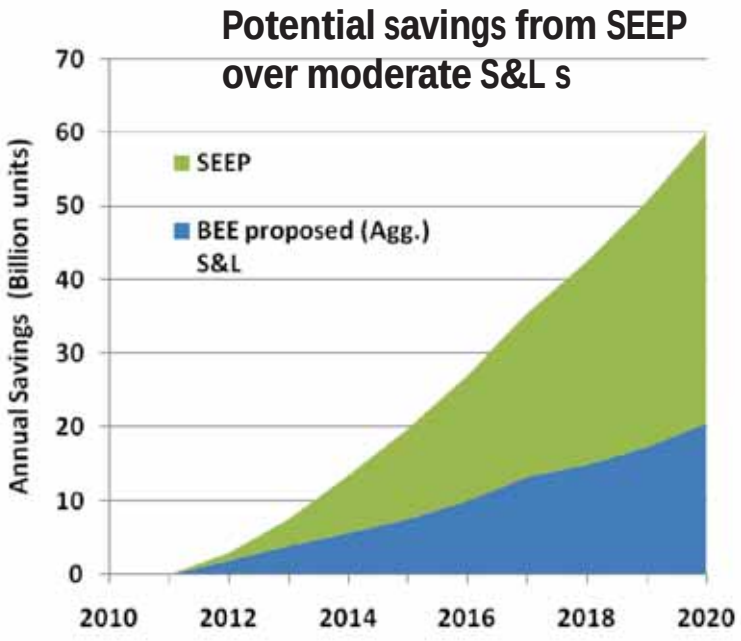
Ghana's Refrigerator Programme

- Downstream rebate and exchange programme launched in 2011:
  - Providing financial incentive from residential electric utility to customers - voucher for ± USD105 per 2-5 star rated unit
  - In exchange for old and inefficient refrigerators, which are sent for dismantling and gas recovery
- Aims to replace 50,000 refrigerators and save 216 GWh – over 4000 replaced so far…
- In partnership with UNDP, GEF and Ghana Energy Commission

More details at:
www.energyguide.org.gh &
www.facebook.com/RefrigeratorEnergyEfficiencyProject

The Indian Approach: SEEP

- Voluntary upstream subsidy **Super Efficient Equipment Programme**
- Incentives for 5m **fans** over 3 3 years (1st phase)
- Fans to consume 35W compared to market average of 70W
- "Super-efficient" fans more efficient than the 5-star rated most-efficient 52W fan



If 60% of stock for only 4 appliances (RACs, Refrig, Fans, TVs) in 2020 is super-efficient, savings of **60 billion kWh** and avoiding peak capacity of **20,000 MW** possible!

Incentive Program Benefits

- Increase penetration of “super-efficient” appliances
- Go beyond S&L policies – accelerating pace of technology to “super-efficient” products
- Prepare market for more stringent S&L program
- Support local industries
- Help raise awareness about energy efficiency

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SEAD Incentives Working Group

Website: http://www.superefficient.org/Activities/Incentives.aspx